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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,849	09/28/2001	Brian Ellis	608-312	2377

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EXAMINER

OH, TAYLOR V

ART UNIT	PAPER NUMBER
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1625

DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/964,849

Applicant(s)

ELLIS ET AL.

Examiner

Taylor Victor Oh

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 11 February 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 5 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_.

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: pages 2-3.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: 1-23.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☐ Other: \_\_\_\_\_.

It is noted that applicants have filed an Amendment after the Final Rejection; applicants' attorney has addressed the issues of record. The proposed amendment will be entered.

**The Status of Claims**

Claims 1-23 are pending.

Claims 1-23 have been rejected.

**Claim Rejections-35 USC 112**

The rejection of claims 1-3 under 35 USC 112, first paragraph, has been withdrawn due to applicants' convincing argument.

**Claim Rejections-35 USC 103**

1. Applicants' argument filed 2/11/2004 have been fully considered but they are not persuasive.

The rejection of claims 1, 4, 7, and 11-23 under 35 U.S.C. 103(a) as being unpatentable over McCain, Jr. et al (U.S. 5,162,578) in view of Manyik et al (U.S. 4,899,003) is maintained with the reasons of the record on 10/2/2003.

The rejection of claims 2, 3, 5, 6, and 8-10 under 35 U.S.C. 103(a) as being unpatentable over Fisher et al (U.S. 3,458,406) in view of Manyik et al (U.S. 4,899,003) is maintained with the reasons of the record on 10/2/2003.

Applicants' attorney has addressed the issues of record, but not rebutted the claim rejections 1-23 under 35 USC 103 (a).

Applicants' Argument

3. The applicants argue the following issues:
  1. the McCain is not relevant to the claimed process and the McCain discloses essentially how to be selective to acid, whereas the Manyik describes how to obtain predominately ethylene product;
  2. the combined teachings of McCain and Manyik would not have been motivated to arrive at the current invention;
  3. McCain is silent on varying the concentration of ethylene reactant or any effect thereof and Manyik describes only ethane as a reactant;
  4. None of Manyik and Fisher provides any disclosure or suggestion on how to adjust the ratio of ethylene to acetic acid through control of the concentration of alkene in the feed;
  5. the combined teachings of Manyik and Fisher would not have been motivated to arrive at the current invention since there is no disclosure of an alkane and alkene oxidation reaction in Fisher.

The applicants' argument have been noted, but these arguments are not persuasive.

First, with regard to the first, second, and third arguments, the Examiner has noted applicants' argument. However, regardless of how to arrive at the current invention, there is a motivation to combine the two references. Manyik et al does teach the use of ethane in the process of producing ethylene and acetic acid, whereas McCain, Jr. et al does point out that of

either ethylene or ethane in the process of producing acetic acid. Both processes can be employed to produce acetic acid either by choosing ethane or ethylene. Furthermore, the Manyik et al does indicate that the addition of water to the input gaseous stream of each stage results in the high acetic acid selectivity with reducing the low ethylene selectivity. Therefore, it would have been obvious to the skillful artisan in the art to have motivated to incorporate the teachings of Manyik's et al ethane and addition of water to each stage into the McCain, Jr. et al process of producing acetic acid, thereby increasing the productivity of acetic acid.

Furthermore, with respect to varying the concentration of ethylene reactant or any effect, the McCain reference does teach that according to Ex. 2 (see col. 11, lines 55-66), the oxidation of ethylene alone was carried out; the gas feed introduced into the reactor was made of 8% ethylene. The selectivity to acetic acid from ethylene was 74 mole percent. From this, it becomes clear that ethylene is not an optional one, but also a required feed component. Furthermore, it is quite possible that the ratio of ethylene to acetic acid in the product stream may be adjusted by controlling the concentration of ethylene in the feed. Therefore, the McCain reference is relevant to the claimed invention.

Second, concerning the fourth and fifth arguments, the Examiner has noted applicants' argument. However, on the contrary to applicants' assertion, Manyik et al does disclose that the molar ratio of alkene to carboxylic acid (12.11 : 4) can be obtained from the total output (see col. 15, Table 4) by controlling the method with or without the removal of water and acetic acid. Also, Manyik et al is directly related to the process of producing intermediate compounds, such as ethylene and acetic acid, whereas the Fisher et al has focused the production of the final products, alkyl carboxylate and alkenyl carboxylate by using those ethylene and acetic acid

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intermediates. Thus, it is quite possible that, in order to produce vinyl acetate prepared by reacting ethylene with acetic acid, the ratio of ethylene to acetic acid in the product stream may be adjusted by controlling the concentration of ethylene in the feed .

Manyik et al and the Fisher et al are in a relationship between the intermediates and the final products. Therefore, if the skilled artisan in the art had desired to extend from the process of ethylene and acetic acid to that of producing both alkyl carboxylate and alkenyl carboxylate, it would have been obvious to the skillful artisan in the art to have motivated to incorporate the teachings of Manyik's et al into the Fisher et al process. This is because the skilled artisan in the art would expect the combined processes to be successful as shown in the Fisher et al process.

Furthermore, applicants' arguments in the above have been discussed and treated in the previous final rejection (see the Final Office Action dated on 10/2/2003). Moreover, there are no further issues to be discussed.

Therefore, the Examiner maintains the rejection of all the claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached from 8:30 am-5:00 pm on Monday through Friday .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mckane can be reached on 571-272-0699 on 7:00 am-6:00 pm on Monday through Thursday.

*Joseph Mckane*  
3/11/04

*BA K. TRINH*

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